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11 August 1998

AGREEMENT

CONCERNING THE ADOPTION OF UNIFORM TECHNICAL PRESCRIPTIONS FOR WHEELED VEHICLES, EQUIPMENT AND PARTS WHICH CAN BE FITTED AND/OR BE USED ON WHEELED VEHICLES AND THE CONDITIONS FOR RECIPROCAL RECOGNITION OF APPROVALS GRANTED ON THE BASIS OF THESE PRESCRIPTIONS */

(Revision 2, including the amendments entered into force on 16 October 1995)

Addendum 12: Regulation No. 13

Revision 3 - Amendment 3

Supplement 3 to the 09 series of amendments - Date of entry into force: 27 April 1998

UNIFORM PROVISIONS CONCERNING THE APPROVAL OF VEHICLES OF CATEGORIES M, N AND O WITH REGARD TO BRAKING

UNITED NATIONS

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*/ Former title of the Agreement:

Agreement Concerning the Adoption of Uniform Conditions of Approval and Reciprocal Recognition of Approval for Motor Vehicle Equipment and Parts, done at Geneva on 20 March 1958.

GE.98- 22754

List of annexes, the title of annex 5, amend to read (including a new footnote):

"Annex 5 - Additional provisions applicable to vehicles subject to marginal 10221 of Annex B of ADR */

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*/ European Agreement concerning the International Carriage of Dangerous Goods by Road as amended."

General amendment:

Paragraph 2.14., amend the word "retarder" to read "endurance braking system" in paragraph 2.14., and in sub-paragraphs and footnotes and throughout the text of the Regulation.

Paragraph 1.1., insert at the end a reference to footnote */ and a new footnote */ to read:

"*/ An alternative set of requirements for category M_1 vehicles is offered in Regulation No. 13-H. Contracting Parties that are signatories both to Regulation No. 13-H and this Regulation recognize approvals to either Regulation as equally valid."

Insert new paragraphs 2.14.1. and 2.14.2., to read:

"2.14.1. The endurance braking system may comprise a single device or a combination of several devices. Each device may have its own control.

2.14.2. Control configurations for endurance braking systems:"

Paragraphs 2.14.1., 2.14.2. and 2.14.3. (former), renumber as paragraphs 2.14.2.1., 2.14.2.2. and 2.14.2.3.

Paragraph 4.4.1., footnote 3/, amend to read:

"3/ ..... 30 (vacant), 31 for Bosnia and Herzegovina, 32-36 (vacant), 37 for Turkey, 38-39 (vacant) and 40 for The former Yugoslav Republic of Macedonia. Subsequent numbers ..... to the Agreement Concerning the Adoption of Uniform Technical Prescriptions for Wheeled Vehicles, Equipment and Parts which can be Fitted and/or be Used on Wheeled Vehicles and the Conditions for Reciprocal Recognition of Approvals Granted on the Basis of these Prescriptions, ..."

Annex 2,

Insert a new item 14., to read:

"14. Results of the tests and vehicle characteristics"

Insert new items 14.11. to 14.11.3., to read:

14.11.	The vehicle is subject to the requirements of annex 5 (ADR)	yes/no 5/
14.11.1.	The vehicle fulfils the endurance braking performance requirements according to the Type-IIA test up to a total maximum mass of ..... tonnes	yes/no 5/
14.11.2.	The power-driven vehicle is fitted with a control device for the endurance braking system on the trailer as defined in paragraph 2.2.6. of annex 5	yes/no 5/
14.11.3.	In the case of trailers, the vehicle is equipped with an endurance braking system as defined in paragraph 2.3. of annex 5	yes/no 5/

Annex 4,

Paragraph 1.6.4., amend to read:

"1.6.4. Vehicles cited in paragraphs 1.8.1.1., 1.8.1.2. and 1.8.1.3. below must satisfy the Type-IIA test described in paragraph 1.8. below instead of the Type-II test."

Introduce a new paragraph 1.8., to read: (Note: This new paragraph replaces the former text of annex 5.)

"1.8. Type-IIA test (endurance braking performance)

1.8.1. Vehicles of the following categories shall be subject to the Type-IIA test:

1.8.1.1. Interurban motor coaches and long distance touring motor coaches of category M_3.

1.8.1.2. Vehicles of category N_3 which are authorized to tow a trailer of category O_4. If the maximum mass exceeds 26 tonnes, the test mass is limited to 26 tonnes or, in the case where the unladen mass exceeds 26 tonnes, this mass is to be taken into account by calculation.

1.8.1.3. Vehicles subject to marginal 10221 of Annex B of ADR (see annex 5).

1.8.2. Test conditions and performance requirements

1.8.2.1. The performance of the endurance braking system shall be tested at the maximum mass of the vehicle or of the vehicle combination.

1.8.2.2. Laden vehicles must be tested in such a manner that the energy input is equivalent to that recorded in the same period of time with a laden vehicle driven at an average speed of 30 km/h on a 7 per cent down-gradient for a distance of 6 km. During the test, the service, secondary and parking braking systems must not be engaged. The gear engaged must be such that the speed of the engine does not exceed the maximum value prescribed by the manufacturer. An integrated endurance braking system may be used, provided that it is suitably phased such that the service braking system is not applied; this may be verified by checking that its brakes remain cold, as defined in paragraph 1.4.1.1. of this annex.

1.8.2.3. For vehicles in which the energy is absorbed by the braking action of the engine alone, a tolerance of ± 5 km/h on the average speed shall be permitted, and the gear enabling the speed to be stabilized at a value closest to 30 km/h on a 7 per cent down-gradient shall be engaged. If the performance of the braking action of the engine alone is determined by measuring the deceleration, it shall be sufficient if the mean deceleration measured is at least 0.6 m/s^2."

Annex 5, amend to read:

"Annex 5

ADDITIONAL PROVISIONS APPLICABLE TO VEHICLES SUBJECT TO MARGINAL 10221 OF ANNEX B OF ADR

1. SCOPE

This annex applies to the vehicles subject to marginal 10221 of Annex B of the European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR).

2. REQUIREMENTS

2.1. Antilock braking system

2.1.1. Power-driven vehicles which are authorized to tow a trailer of category O_4 shall be equipped with category 1 antilock systems complying with annex 13 of this Regulation.

2.1.2. Trailers of category O_4 shall be equipped with category A antilock systems complying with annex 13 of this Regulation.

2.2. Endurance braking system

Power-driven vehicles having a maximum mass exceeding 16 tonnes or authorized to tow a trailer of category O_4 shall be fitted with an endurance braking system which complies with the requirements of paragraph 1.8. of annex 4 of this Regulation. The following requirements also apply:

2.2.1. The endurance braking control configurations shall be chosen from those described in paragraph 2.14. of this Regulation.

2.2.2. In the case of an electrical failure of the antilock system, integrated or combined endurance braking systems shall be switched off automatically.

2.2.3. The effectiveness of the endurance braking system shall be controlled by the antilock braking system such that the axle(s) braked by the endurance braking system cannot be locked by that system at speeds above 15 km/h. However, this requirement shall not apply to that part of the braking system constituted by the natural engine braking.

2.2.4. The endurance braking system shall comprise several stages of effectiveness, including a low stage appropriate for the unladen condition. Where the endurance braking system of a power-driven vehicle is constituted by its engine, the different gear ratios shall be considered to provide the different stages of effectiveness.

2.2.5. In the case of towing vehicles, the loading condition, as described in paragraph 1.8.2.1. of annex 4 of this Regulation, shall be the maximum mass of the vehicle combination, comprising the maximum mass of the towing vehicle and its authorized maximum towed mass, but not exceeding a total of 44 tonnes."